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TITLE: EXCIMER LASER DEVICE
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ABSTRACT:

PURPOSE: To obtain a laser device, in which decrease in laser output is very small with respect to the oscillating frequency of laser pulses and a laser medium is sealed stably for a long period, by providing a means, which projects light so as to dissociate chemical bonding of hydrogen chloride and minute amount of impurities, which are included in the laser medium.

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119(c)

CONSTITUTION: Light having a wavelength in the range of 280nm~500nm is projected to a laser medium. Hydrogen chloride is used as one of the laser medium in an XeCl laser. Of molecular species, which are considered to be present in the cabinet of the laser, especially essential molecular species and the wavelengths of light, which are required to cut the molecular bonding, are shown in the Figure. When the light in the wavelength region less than 500nm is projected, most of chloride impurities, which are not required in laser oscillation, are dissociated. More desirably, when the wavelengths in the range more than 280nm and less than 500nm are used, the hydrogen chloride (HCl), which contributes to the laser oscillation is not dissociated, and only the chloride impurities can be dissociated.

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